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1. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

said mount frame comprising a pair of spaced latch pins;

said snowplow assembly being releasably securable to said

5 mount frame, said snowplow assembly comprising a lift frame supportable by a pair of stand assemblies, said stand assemblies being pivotal about a horizontal pivot axis between a down position in which said stand assemblies support said snowplow assembly and an up position in which said stand assemblies do not support said snowplow assembly, each of said stand  
10 assemblies having a latch hook engageable with one of said latch pins of said mount frame, wherein said latch hooks are engaged with said latch pins to secure said snowplow assembly to said mount frame when said stand assemblies are in said up position and disengaged with said latch pins when said stand assemblies are in said down position to allow said mount frame to  
15 separate from said snowplow assembly.

2. The combination of claim 1 wherein said mount frame further comprises a pair of spaced receivers and said lift frame further comprises a pair of horns, said horns of said lift frame being received in said receivers of said mount frame when said snowplow assembly is secured to said mount frame.

3. The combination of claim 1 further comprising a lock pin assembly on each of said stand assemblies, said lock pin assemblies operable to lock said stand assemblies in one of said up and down positions.

4. The combination of claim 1 wherein said snowplow assembly further comprises a trunnion pivotal relative to said lift frame about a transversely extending horizontal axis.

5. The combination of claim 4 wherein said snowplow assembly further comprises an A-frame pivotal relative to said trunnion and said lift frame about a longitudinally extending horizontal axis.

6. The combination of claim 5 wherein said snowplow assembly further comprises a snowplow blade mounted on a front end of said A-frame.

7. The combination of claim 5 wherein said lift frame of said snowplow assembly further comprises a hydraulic cylinder operable to raise said A-frame.

5 8. The combination of claim 1 wherein each of said stand assemblies comprises a pair of telescoping inner and outer tubes.

9. The combination of claim 1 wherein each of said stand assemblies has an adjustable height.

10. In combination, a mount frame adapted to be attached to a vehicle and a snowplow assembly:

5       said snowplow assembly being releasably securable to said mount frame, said snowplow assembly comprising a lift frame, a trunnion and an A-frame, said trunnion being pivotal about a first transverse, horizontal axis relative to said lift frame, said A-frame being pivotal about a horizontal, longitudinal axis relative to said trunnion, said lift frame including a pair of stand assemblies pivotal about a second transverse, horizontal pivot axis between a down position in which said stand assemblies support said snowplow assembly and an up position in which said stand assemblies do not support said snowplow assembly, each of said stand assemblies being engageable with said mount frame to secure said snowplow assembly to said mount frame when said stand assemblies are in said up position.

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11. The combination of claim 10 wherein said mount frame comprises a pair of spaced receivers and said lift frame further comprises a pair of horns, said horns of said lift frame being received in said receivers of said mount frame when said snowplow assembly is secured to said mount frame.

12. The combination of claim 10 further comprising a lock assembly on each of said stand assemblies, said lock assemblies being operable to lock said stand assemblies in one of said up and down positions.

13. The combination of claim 10 wherein said mount frame comprises a pair of latch pins which are engaged by latch hooks on said stand assemblies to secure said snowplow assembly to said mount frame when said stand assemblies are in said up position.

14. The combination of claim 10 wherein said snowplow assembly further comprises a snowplow blade mounted on a front end of said A-frame.

15. The combination of claim 10 wherein said lift frame of said snowplow assembly further comprises a hydraulic cylinder operable to raise said A-frame.

16. The combination of claim 10 wherein each of said stand assemblies has an adjustable height.

17. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

said mount frame comprising a pair of spaced receivers and a pair of spaced latch pins;

5           said snowplow assembly comprising a lift frame having a pair of rearwardly projecting horns and a pair of stand assemblies, said stand assemblies being pivotal about a horizontal pivot axis between a down position in which said stand assemblies support said snowplow assembly and an up position, each of said stand assemblies having a latch hook operable to  
10           engage one of said latch pins of said mount frame, wherein to secure said snowplow assembly to said mount frame said rearwardly projecting horns of said snowplow assembly are engaged with said receivers of said mount frame and said stand assemblies are pivoted upwardly causing said latch hooks to engage said latch pins of said mount frame.



18. The combination of claim 17 wherein said snowplow assembly further comprises a trunnion and an A-frame, said trunnion being pivotal about a transverse, horizontal axis relative to said lift frame, said A-frame being pivotal about a horizontal, longitudinal axis relative to said trunnion.

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19. The combination of claim 17 wherein each of said receivers is rectangular in cross-section, having top and bottom plates interconnected with laterally spaced side plates.

20. The combination of claim 17 wherein said bottom plate of each of said receivers has a depending lip and at least one of said side plates of each of said receivers has a flared portion, said depending lip and said flared portion aid in guiding one of said horns into said receiver.

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21. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

said mount frame comprising a pair of spaced latch pins;

said snowplow assembly comprising a lift frame having a pair of

5 pivotal stand assemblies, each of said stand assemblies having an independently adjustable height, said stand assemblies being pivotal about a horizontal pivot axis between a down position in which said stand assemblies support said snowplow assembly and an up position, each of said stand  
10 assemblies having a latch hook engageable with one of said latch pins of said mount frame, wherein to secure said snowplow assembly to said mount frame said stand assemblies are pivoted upwardly causing said latch hooks to engage said latch pins of said mount frame.

22. The combination of claim 21 wherein each of said stand assemblies comprises a pair of telescoping inner and outer tubes.

23. The combination of claim 21 wherein said snowplow assembly further comprises a trunnion and an A-frame, said trunnion being  
5 pivotal about a transverse, horizontal axis relative to said lift frame, said A-frame being pivotal about a horizontal, longitudinal axis relative to said trunnion and having a snowplow blade removably mounted to a front end of said A-frame.

24. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

said mount frame comprising a first portion adapted to be attached to a vehicle and a second portion detachable from said first portion;

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said snowplow assembly being releasably securable to said mount frame, said snowplow assembly comprising a lift frame supportable by a pair of stand assemblies, said stand assemblies being pivotal about a horizontal pivot axis between a down position in which said stand assemblies support said snowplow assembly and an up position in which said stand

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assemblies do not support said snowplow assembly, each of said stand assemblies having a latch hook engageable with said second portions of said mount frame, wherein said latch hooks are engaged with said second portions of said mount frame to secure said snowplow assembly to said mount frame when said stand assemblies are in said up position and disengaged with said second portions of said mount frame when said stand assemblies are in said down position to allow said mount frame to separate from said snowplow assembly.

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25. The combination of claim 24 wherein said second portion of said mount frame comprises a pair of receivers.

26. The combination of claim 25 wherein said second portion of said mount frame further comprises a pair of latch pins outside said receivers.

27. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

5       said mount frame comprising a first portion adapted to be secured to the vehicle and a second portion removably securable to said first portion without the use of tools;

10       said snowplow assembly including a lift frame, a plow blade and a motion generating device for effecting relative movement between said plow blade and lift frame, said snowplow assembly being removably securable to said second portion of said mount frame and being attachable thereto and detachable therefrom as one assembly;

      said mount frame second portion, when attached to said mount frame first portion, producing a first ground clearance distance between said second portion and a ground surface;

15       said mount frame first portion, with said mount frame second portion detached therefrom, producing a second ground clearance distance between said first portion and the ground surface;

      said second ground clearance distance being greater than said first ground clearance distance.

28. The combination of claim 27 wherein said mount frame second portion comprises a pair of receivers and said snowplow assembly includes a pair of horns receivable in respective ones of said receivers.

29. The combination of claim 28 wherein each said receiver  
5 includes a latch pin secured thereto and said snowplow assembly includes a pair of latch hooks engageable with respective ones of said latch pins.

30. The combination of claim 29 wherein each said latch hook is secured to a support stand for supporting said snowplow assembly when detached from the vehicle.

10 31. The combination of claim 30 wherein said support stands are pivotally connected to said lift frame for pivoting movement to and between a snowplow supporting down position and an up position wherein said latch hooks are engaged with respective ones of said latch pins.

32. A snowplow assembly comprising:

a lift frame;

a trunnion pivotally connected to said lift frame for pivoting movement about a transverse, horizontal axis;

5 an A-frame having a plow blade on a forward end and being pivotally connected on a rearward end to said trunnion for pivoting movement about a longitudinal, horizontal axis; and

a motion generating device for effecting relative movement between said A-frame and lift frame for pivoting movement about the transverse, horizontal axis;

10 said lift frame, trunnion, A-frame and motion generating device all being attachable to and detachable from a vehicle as one assembly.



33. The snowplow assembly of claim 32 further including a pair of transversely spaced support stands mounted to said lift frame, each support stand being height adjustable independently of the other.

34. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

said mount frame comprising at least one latch pin;

said snowplow assembly being releasably securable to said

5 mount frame, said snowplow assembly comprising a lift frame supportable by at least one stand assembly, said at least one stand assembly being pivotal about a horizontal pivot axis between a down position in which said at least one stand assembly supports said snowplow assembly and an up position in which said at least one stand assembly does not support said snowplow  
10 assembly, said at least one stand assembly having a latch hook engageable with said at least one latch pin of said mount frame, wherein said latch hook is engaged with said at least one latch pin to secure said snowplow assembly to said mount frame when said at least one stand assembly is in said up position and disengaged with said at least one latch pin when said stand assembly is in  
15 said down position to allow said mount frame to separate from said snowplow assembly.

35. The snowplow assembly of claim 34 wherein said mount  
frame further comprises at least one receiver and said lift frame further  
comprises at least one horn, said at least one horn of said lift frame being  
received in said at least one receiver of said mount frame when said snowplow  
5 assembly is secured to said mount frame.

36. The snowplow assembly of claim 34 wherein said at least  
one latch hook and said at least one latch pin are positioned and configured  
such that the resultant forces generated therebetween pass through the  
horizontal pivot axis of said at least one stand assembly and in doing so avoid  
10 generating a moment about the pivot axis.

37. A snowplow assembly comprising:

a lift frame;

a plow blade;

a motion generating device for effecting relative movement

5 between said lift frame and plow blade for pivoting movement of the plow blade about a transverse, horizontal axis; and

a pair of transversely spaced stand assemblies mounted to said lift frame, each said stand assembly comprising:

a C-shaped bracket having opposed upper and lower plates and

10 a hole in each said plate;

a stand leg with a stand foot secured to a lower end of said stand leg, said stand leg passing through said holes in said upper and lower plates of said C-shaped bracket;

a pivoting locking plate positioned intermediate said upper and lower plates of said C-shaped bracket, said locking plate having a hole therein, said stand leg passing through said locking plate hole, said locking plate including a handle facilitating manual pivoting of said locking plate relative to said C-shaped bracket;

15 a first spring operable between said lower plate of said C-shaped bracket and said locking plate normally biasing an edge of said locking plate hole against said stand leg thereby locking said stand leg relative to said C-shaped bracket, said handle being operable to pivot said locking plate such that said locking plate hole edge is out of engagement with said stand leg

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thereby freeing said stand leg for movement relative to said C-shaped bracket;  
and

a second spring operable between said upper plate of said C-shaped bracket and said stand leg normally biasing said stand leg to an up  
5 position.

38. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

said mount frame comprising a first latch element;

said snowplow assembly being releasably securable to said

5 mount frame, said snowplow assembly including a lift frame supportable by a stand, said stand being pivotal about a horizontal pivot axis between a down position in which said stand supports said snowplow assembly and an up position in which said stand does not support said snowplow assembly, said stand having a second latch element selectively engageable with said first latch  
10 element of said mount frame, wherein said first and second latch elements are engaged with one another to secure said snowplow assembly to said mount frame when said stand is in said up position, and disengaged with one another when said stand is in said down position to allow said mount frame to separate from said snowplow assembly.

39. The combination of claim 38 wherein one of said first and second latch elements is a latch pin and the other of said first and second latch elements is a latch hook.

5 40. The combination of claim 39 wherein said first latch element is a latch pin and said second latch element is a latch hook.

41. A snowplow assembly comprising:

a lift frame;

a trunnion connected to said lift frame;

an A-frame having a plow blade on a forward end and being

5 connected on a rearward end to said trunnion; and

a motion generating device for effecting relative movement  
between said A-frame and lift frame;

said lift frame, trunnion, A-frame and motion generating device  
all being attachable to and detachable from a vehicle as one assembly;

10 said lift frame, trunnion and A-frame being pivotally connected  
in such a manner that said A-frame can pivot relative to said lift frame about a  
transverse, horizontal axis as well as can pivot relative to said lift frame about a  
longitudinal, horizontal axis.



42. The snowplow assembly of claim 41 wherein said trunnion is pivotally connected to said lift frame for pivoting motion about a transverse, horizontal axis and said A-frame is pivotally connected to said trunnion for pivoting motion about a longitudinal, horizontal axis.

43. A snowplow assembly comprising:

a lift frame;

a trunnion connected to said lift frame;

an A-frame having a plow blade on a forward end and being

5 connected on a rearward end to said trunnion; and

a motion generating device for effecting relative movement  
between said A-frame and lift frame;

said lift frame, trunnion, A-frame and motion generating device  
all being attachable to and detachable from a vehicle as one assembly;

10 said lift frame, trunnion, A-frame and plow blade being pivotally  
connected in such a manner that said plow blade can pivot relative to said lift  
frame about a transverse, horizontal axis as well as can pivot relative to said lift  
frame about a longitudinal, horizontal axis.

44. The snowplow assembly of claim 43 wherein said trunnion is pivotally connected to said lift frame for pivoting motion about a transverse, horizontal axis and said A-frame is pivotally connected to said trunnion for pivoting motion about a longitudinal, horizontal axis.

45. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

said mount frame comprising a first portion adapted to be secured to the vehicle and a second portion removably securable to said first portion without the use of tools;

said snowplow assembly including a lift frame, a plow blade and a motion generating device for effecting relative movement between said plow blade and lift frame, said snowplow assembly being removably securable to said second portion of said mount frame and being attachable thereto and detachable therefrom as one assembly;

said mount frame second portion, when attached to said mount frame first portion, producing a first approach angle between said second portion and a ground surface;

said mount frame first portion, with said mount frame second portion detached therefrom, producing a second approach angle between said first portion and the ground surface;

said second approach angle being greater than said first approach angle.

46. The combination of claim 45 wherein said mount frame second portion comprises a pair of receivers and said snowplow assembly includes a pair of horns receivable in respective ones of said receivers.

5 47. The combination of claim 46 wherein each said receiver includes a latch pin secured thereto and said snowplow assembly includes a pair of latch hooks engageable with respective ones of said latch pins.

48. The combination of claim 47 wherein each said latch hook is secured to a support stand for supporting said snowplow assembly when detached from the vehicle.

10 49. The combination of claim 48 wherein said support stands are pivotally connected to said lift frame for pivoting movement to and between a snowplow supporting down position and an up position wherein said latch hooks are engaged with respective ones of said latch pins.

50. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

5       said mount frame comprising a first portion adapted to be secured to the vehicle and a second portion removably securable to said first portion without the use of tools;

10       said snowplow assembly including a lift frame, a plow blade and a motion generating device for effecting relative movement between said plow blade and lift frame, said snowplow assembly being removably securable to said second portion of said mount frame and being attachable thereto and detachable therefrom as one assembly;

15       said mount frame second portion, when attached to said mount frame first portion, producing a first ground clearance distance between said second portion and a ground surface and a first approach angle between said second portion and the ground surface;

20       said mount frame first portion, with said mount frame second portion detached therefrom, producing a second ground clearance distance between said first portion and the ground surface and a second approach angle between said first portion and the ground surface;

25       said second ground clearance distance being greater than said first ground clearance distance and said second approach angle being greater than said first approach angle.

51. In combination a mount frame adapted to be attached to a vehicle and a snowplow assembly:

5       said snowplow assembly including a lift frame, a plow blade and a motion generating device for effecting relative movement between said lift frame and said plow blade, snowplow assembly being removably securable to said mount frame and being attachable thereto and detachable therefrom as one assembly;

10       said lift frame including a pair of transversely spaced horns and a pair of transversely spaced, pivoting latch hooks each of which has a pin engaging surface with a camming curvature associated therewith;

      said mount frame including a pair of transversely spaced flared receivers and a pair of transversely spaced latch pins;

15       said horns being received in said receivers during securement of said snowplow assembly to said mount frame, said pin engaging surfaces of said hooks cooperating with said pins to cam said snowplow assembly and mount frame together during pivoting of said latch hooks.

52. The combination of claim 51 wherein each said latch hook is mounted on a support stand which is pivoted to said lift frame, said latch hooks engaging said latch pins when said support stands are pivoted to an up position and disengaging with said latch pins when said support stands are pivoted to a down snowplow assembly supporting position.

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53. The combination of claim 53 wherein each said support stand is height adjustable independently of the other said support stand.

54. The combination of claim 53 wherein each said support stand is continuously height adjustable.



55. A snowplow assembly comprising:

a lift frame;

a trunnion connected to said lift frame;

an A-frame having a plow blade on a forward end and being

5 connected on a rearward end to said trunnion;

a motion generating device for effecting relative movement  
between said A-frame and lift frame;

said lift frame, trunnion, A-frame and plow blade being pivotally  
connected in such a manner that said plow blade can pivot relative to said lift  
10 frame about a transverse, horizontal axis as well as can pivot relative to said lift  
frame about a longitudinal, horizontal axis; and

a pair of transversely spaced support stands mounted to said lift  
frame for supporting said snowplow assembly above a ground surface during  
detachment from a vehicle, each of said support stands being height  
15 adjustable independently of the other said support stand.

56. The snowplow assembly of claim 54 wherein each of said support stands is continuously height adjustable.

57. A snowplow assembly comprising:

a lift frame;

a plow blade;

a motion generating device for effecting relative movement

5 between said lift frame and said plow blade; and

a pair of transversely spaced support stands mounted to said lift frame for supporting said lift frame above a ground surface, each of said pair of stands being height adjustable independently of the other of said stands.

58. The snowplow assembly of claim 56 wherein each of said support stands is continuously height adjustable.

59. The snowplow assembly of claim 56 wherein said lift frame, plow blade and motion generating device are adapted to be attached to and detached from a vehicle as a single assembly.

60. The snowplow assembly of claim 56 wherein said plow blade is operable to pivot relative to said lift frame about a longitudinal, horizontal axis.

61. The snowplow assembly of claim 58 wherein said plow blade is operable to pivot relative to said lift frame about a longitudinal, horizontal axis.

62. The snowplow assembly of claim 56 wherein each said support stand comprises:

a bracket having opposed first and second plates and a hole in each said plate;

5 a leg passing through said holes in said first and second plates of said bracket;

a pivoting locking plate positioned intermediate said first and second plates of said bracket, said locking plate having a hole therein, said leg passing through said locking plate hole, said locking plate including a handle  
10 facilitating manual pivoting of said locking plate relative to said bracket;

a first spring normally biasing an edge of said locking plate hole against said leg thereby locking said leg relative to said bracket, said handle being operable to pivot said locking plate such that said locking plate hole edge is out of engagement with said leg thereby freeing said leg for movement relative  
15 to said bracket; and

a second spring normally biasing said leg relative to said bracket.

63. The snowplow assembly of claim 61 wherein said first spring is operable between one of said first and second plates of said bracket and said locking plate.

64. The snowplow assembly of claim 62 wherein said second spring is operable between the other of said first and second plates of said bracket and said leg.

65. A snowplow assembly comprising:

a lift frame;

a plow blade, said plow blade being pivotal relative to said lift frame about a longitudinal, horizontal axis; and

5 a motion generating device for effecting relative movement between said lift frame and said plow blade;

said lift frame, plow blade and motion generating device being adapted to be attached to and detached from a vehicle as a single assembly.